



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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JUN 04 2013

Ref: 8EPR-N

Todd Yeager, Field Manager
Bureau of Land Management
Miles City Field Office
c/o MCFO RMP Comments
111 Garryowen Road
Miles City, MT 59301-0940

Re: Miles City Field Office Draft Resource Management
Plan and Environmental Impact Statement CEQ #20130054

Dear Mr. Yeager:

In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Bureau of Land Management's (BLM) Miles City Field Office (MCFO) Draft Resource Management Plan and Environmental Impact Statement (Draft RMP/EIS). We appreciated the opportunity to work closely with the BLM as a cooperating agency prior to the public release of the Draft RMP/EIS. We also appreciate our discussions to date on this important action, particularly those involving air quality and water resources. These discussions have allowed us to work through a number of issues regarding air and water resources and to come to agreement on how to address them. It is evident from our review that the BLM put extensive effort into clarifying and ultimately improving this draft. In providing the following comments, we remain committed to working with the BLM to seek ways to address them.

Background

The MCFO planning area consists of approximately 25.8 million acres in the eastern third of Montana and includes Carter, Custer, Daniels, Dawson, Fallon, Garfield, McCone, Powder River, Prairie, Richland, Roosevelt, Rosebud, Sheridan, Treasure, and Wibaux counties, as well as portions of Big Horn and Valley counties. The planning area also includes lands of the Fort Peck Tribes (Assiniboine and Sioux Tribes), the Northern Cheyenne Tribe, and the Turtle Mountain Band of Chippewa. Of this large planning area, about 2.8 million surface acres (or 11%) are administered by BLM. In addition, of the 25 million mineral acres in the planning area, about 11 million (or 44%) are administered by BLM.

Alternatives identified in the Draft RMP/EIS include: Alternative A (No Action alternative), Alternative B (emphasis on conservation), Alternative C (emphasis on resource use such as energy and mineral development and other commodity uses), Alternative D (emphasis on widest range of uses with least

restrictive management actions for energy and commodity development), and Alternative E – the BLM's Preferred Alternative (emphasis on resource use while providing protection to sensitive resources).

The EPA's Comments and Recommendations

Given the extent of potential development within the MCFO planning area and the existing conditions of air and water resources, the EPA is particularly interested in the BLM's approach to ensuring protection of these valuable resources. The EPA's comments, along with recommendations for how the BLM might address them, are specific to the following issues: (1) air resources; (2) groundwater resources; (3) surface water resources; (4) public drinking water supply sources; (5) water management and water resource monitoring (6) wetlands, riparian areas and floodplains; (7) environmental justice; and (8) climate change.

(1) Air Resources

Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through NEPA

The U.S. Department of Interior, the U.S. Department of Agriculture and the EPA signed the "Memorandum of Understanding (MOU) Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process" on June 11, 2011. The BLM Montana Office has done an excellent job of implementing this MOU and coordinating the associated Air Quality Technical Workgroup (AQTW) members since February of 2012. We believe the collaboration among the federal and state agencies participating in the AQTW has ensured that effective and efficient NEPA air quality evaluations have occurred and will continue to do so moving forward and that air quality will be protected. Since many of our comments already have been addressed through the AQTW, our remaining comments below are intended to provide clarification to the Draft RMP/EIS and supporting documents.

Disclosure of Potential Impacts

BLM conducted near-field modeling to disclose potential impacts to the National Ambient Air Quality Standards (NAAQS) in the MCFO planning area. However, it appears that the 3-hr SO₂ NAAQS analysis was omitted from the near-field modeling runs for the Draft RMP/EIS although it was included in the modeling protocol agreed to through the AQTW. While there may not be an impact concern given that the 1-hr, 24-hr and annual SO₂ results demonstrate compliance with the NAAQS, we recommend that compliance with the 3-hr SO₂ NAAQS also be demonstrated.

Air Resource Management Plan (ARMP)

The Draft RMP/EIS includes an ARMP for oil and gas activities that describes the air resource adaptive management strategy to be used to assess future air quality and air quality related values (AQRVs) and to identify mitigation measures to address unacceptable impacts associated with future oil and gas development. ARMP Section 6.1 describes initial mitigation measures that will be applied upon issuance of the Record of Decision (ROD) through leasing documents and project-specific NEPA documents. We

fully support these initial mitigation actions and commend the BLM for its efforts to protect air quality from the outset.

The Air Resources Technical Support Document (ARTSD), p. 6, states that Tier 4 emission standards were assumed in the Draft RMP/EIS near-field modeling analysis in order to demonstrate compliance with the 1-hr NO₂ NAAQS. We note that the ARMP, Section 6.1, initial mitigation requirement for diesel drill rig engines >200 hp to meet Tier 4 emission standards for non-road diesel engines indicates that “oil and gas operators may use drill rig engines that exceed Tier 4 emission standards if modeling demonstrates compliance with the NAAQS and protection of AQRVs.” We assume that this caveat means that additional near-field modeling will be required at the project-level if higher-emitting engines will be used. We recommend the Final RMP/EIS and ROD include this commitment.

We also note an inconsistency between the ARMP and Draft RMP/EIS Chapter 4, Environmental Consequences. The ARMP Section 6.1 includes an initial mitigation measures list which does not include a requirement for drill and completion engines >750 hp to meet Tier 4 generator set emission standards even though this was the emission rate used in the near-field modeling exercise (see the ARTSD, p. F-13, for modeled drill rig emission calculations). Both the Draft RMP/EIS Chapter 4 (p. 4-7) and the ARTSD (p. 6) reference this assumption. Based on conversations between our staffs, we understand that BLM’s near-field modeling analysis included the Tier 4 generator set emission rate for engines > 750 hp in order to be representative of what is currently happening in the field (based on BLM experience), and that BLM does not believe requiring Tier 4 generator set emission standards for engines >750 hp is necessary to demonstrate compliance with the 1-hour NO₂ NAAQS. To disclose BLM’s intent, we recommend that the Final RMP/EIS include the following:

- Clarification regarding which mitigation measures were necessary to ensure compliance with the NAAQS; and
- an explanation as to why BLM believes requiring drill and completion engines >750 hp to meet Tier 4 generator set emission standards is not necessary to demonstrate compliance with the 1-hour NO₂ NAAQS.

The ARMP Section 6.2, Monitoring-Based Mitigation, indicates that prior to completion of the photochemical grid modeling (PGM) analysis, monitoring-based thresholds for determining enhanced mitigation would be based on evaluation of monitored exceedances of the NAAQS. In the discussion of modeling-based thresholds for evaluating enhanced mitigation (Section 6.3), it is stated that “potential future impacts” on NAAQS or Montana Ambient Air Quality Standards (MAAQS) will be considered. To provide clarity regarding the trigger and consistency within the ARMP, we recommend replacing this language with “NAAQS or MAAQS exceedances” predicted via future PGM.

Further, Section 1.5 of the ARMP includes a detailed discussion of requirements for oil and gas activities that were developed through the 2008 Montana Statewide Oil & Gas EIS (Statewide), some of which are being integrated into the MCFO ARMP. We note that two of the Statewide requirements that are not “carried forward” into this ARMP are requirements to (1) maximize the number of wells connected to each compressor and (2) utilize natural gas fired or electrical compressors or generators. We recommend that BLM provide its rationale for discontinuing these emission-reducing requirements. In addition, given that the Draft RMP/EIS and Monitoring Appendix note that coal bed natural gas

activities in the Decker area will continue to be managed under the Statewide EIS, it is somewhat difficult to follow which Statewide and/or MCFO requirements apply where. It would be helpful to provide a table in the ARMP to clarify if/when/where each Statewide and/or MCFO requirement applies upon completion of the ROD.

Finally, we recommend the following edits to the Draft ARMP to clarify terminology and/or to reflect recent discussions of the AQTW:

- ARMP pp. 14-15: We understand that BLM intends to run the PGM to cover the full 20 year planning cycle of the RMP rather than performing an initial PGM run followed by periodic reassessments as described in Section 5.1.2 on p. ARMP-14. We recommend revising the text to clarify this point. In addition, we recommend revising Table ARMP-4 to include time in the schedule for the AQTW to review results from emissions modeling.
- Section 6.2.3 indicates that following PGM completion, BLM would calculate design values for each pollutant monitored at a federal reference monitor within the planning area. We recommend revising this language to include federal equivalent method monitors since the PM₁₀ monitors at Birney, Broadus and Sidney are federal equivalent method monitors (not federal reference method monitors).
- Section 6.2.4 does not include a timeline for implementation of enhanced mitigation after the PGM is completed. We recommend a 1-year timeline for implementation of measures after selection of enhanced mitigation, similar to the timeline provided for implementation of enhanced mitigation measures prior to PGM completion (see Section 6.2.2: "Selected mitigation measures would be implemented within 1 year after the BLM decision to apply additional mitigation").

Air Resource Technical Support Document

It is important that the emissions controls and mitigation measures used to develop the emissions inventory be included as required mitigation measures for activities under the RMP. The alternative-specific emissions inventory includes an 84% control efficiency of gravel or scoria surfacing for calculating dust emissions. The ARTSD, p. 6, identifies assumptions used in this emissions inventory, including a 50% fugitive dust control efficiency but no mention of this 84% control with gravel or scoria. If 84% surfacing control was used in the near-field modeling, then we recommend that this control efficiency be added to the identified assumptions on p. 6 of the ARTSD and that gravel/scoria surfacing be added to the initial mitigation list of the ARMP, Section 6.1.

In addition, we have a few recommendations for clarification of the TSD, as follows:

- p. 16 - For disclosure purposes, it would be helpful to explain the emissions associated with "production" sources. We recommend including the discussion of emissions associated with "production" sources, e.g., oil wells, gas wells, and CBNG wells, from the September 21, 2012, final near-field modeling protocol, p. 8.
- p. 17 – Figure 1 illustrates the well pad and receptor layout for PM₁₀ and PM_{2.5} modeling. Please clarify whether this same receptor layout was used for the other criteria pollutants.

- p. 22 - Predicted criteria air pollutant concentrations were compared to the NAAQS, MAAQS, and Prevention of Significant Deterioration (PSD) increments. For disclosure purposes, we recommend the annual comparisons for the NAAQS and MAAQS be discussed in this paragraph.

(2) Groundwater Resources

Groundwater Resource Characterization

The potential and existing groundwater use in the region coupled with the level of expected development make it important to characterize the groundwater resources within the planning area. We recommend expanding the discussion in the Final RMP/EIS, Chapter 3, Affected Environment, to include the following information:

- A description of all aquifers in the study area, noting which aquifers are Underground Sources of Drinking Water (USDWs). Federal Safe Drinking Water Act regulations define a USDW as an aquifer or portion thereof: (a)(1) which supplies any public water system; or (2) which contains a sufficient quantity of ground water to supply a public water system; and (i) currently supplies drinking water for human consumption; or (ii) contains fewer than 10,000 mg/l total dissolved solids; and (b) which is not an exempted aquifer (See 40 CFR Section 144.3); and
- Maps depicting the location of sensitive groundwater resources such as: municipal watersheds, source water protection zones (available from the Montana Department of Environmental Quality-MDEQ, Joe Meek, see contact information below), sensitive aquifers, and recharge areas.

Groundwater Impacts and Mitigation

The EPA recommends that the Final RMP/EIS analyze potential impacts to groundwater quality and quantity related to drilling, including leaks and spills; associated production and disposal of produced water, including potential use of pits, underground injection control (UIC) wells, and evaporation ponds; and impacts associated with production wellbore integrity and pipeline use. The EPA also recommends that the Final RMP/EIS discuss measures the BLM will require at the project level to minimize the potential for these impacts to occur. Appropriate groundwater protection measures can vary depending on hydrologic conditions and the presence of drinking water resources. Specifically, the EPA recommends that BLM analyze and disclose potential groundwater protection, monitoring and mitigation measures, including:

- BMPs and other mitigation measures such as closed loop drilling, monitoring of water quality and water levels, closure and monitoring of reserve pits, and lining and monitoring of evaporation ponds;
- Setback stipulations, such as No Surface Occupancy (NSO), to minimize the potential for impacts to potential drinking water resources, including domestic water wells and public water supply wells. EPA recommends a minimum 500-foot setback for private wells. Setbacks are effective health and environment protection tools because they provide an opportunity for released contaminants to attenuate before reaching a water supply well. They may also afford an

opportunity for a release to be remediated before it can impact a well, or for an alternate water supply to be secured. We note that the North Dakota Oil and Gas Commission has adopted a 500-foot setback from occupied dwellings (and by default, the associated domestic well);

- A mitigation plan for remediating future unanticipated impacts to drinking water wells, such as requiring the operator to remedy those impacts through treatment, replacement, or other appropriate means; and
- A general production well schematic that depicts the following: casing strings; cement outside and between the various casing strings; and the relationship of the well casing design to potentially important hydro-geological features such as confining zones and aquifers or aquifer systems that meet the definition of a USDW. Discuss how the generalized design will achieve effective isolation of USDWs from production activities and prevent migration of fluids of poorer quality into zones with better water quality.

(3) Surface Water Resources

Surface Water Resource Characterization

According to the Draft RMP/EIS, 97% of state water use is from surface waters and nearly 10% of that use is for drinking water. Consequently, we recommend that the Final RMP/EIS identify water resources as an important resource to manage and protect in the planning area. The EPA also recommends the Final RMP/EIS describe the current water quality conditions, if available, for each surface water body in the planning area, including perennial, intermittent and ephemeral streams, rivers, lakes, reservoirs; and surface water drinking water sources.

We also recommend that the Final RMP/EIS be updated to reference Montana's 2012 Clean Water Act (CWA) Section 303(d) Impaired Waters List, as approved by the EPA, and discuss water quality trends observed between 2010 and 2012 to more fully describe current conditions in, and downstream of, the planning area. A detailed map showing all impaired waterbodies within the planning area, as well as impaired waters downstream of the planning area, would be a useful tool in the Final RMP/EIS to convey the latest available information regarding existing water quality. For ease of identification, we suggest adding waterbody segment ID numbers to the table of CWA Section 303(d) waters in the Water Appendix. In addition, if MDEQ has not assessed the water quality in all waterbodies within the planning area, then we recommend that the Final RMP/EIS list such waterbodies and indicate that the water quality condition has not yet been assessed by MDEQ.

Finally, please update the reference on p. 3-42 to the Northern Cheyenne Tribe's water quality standards, which were approved by the EPA on March 21, 2013, with no action taken on the electrical conductivity (EC) and sodium absorption ratio (SAR) criteria. The approved standards apply to all Reservation surface waters. BLM can also direct the reader to the following link for more information from the Northern Cheyenne website: <http://www.cheyennenation.com/water.html>.

Sediment Load Analysis

Because sediment loading has already caused impairment of numerous waterbodies in the planning area,

and future activities that may be authorized under this RMP, including oil and gas development, livestock grazing and use of off-highway vehicles, would result in new surface disturbance that may contribute to erosion, it is important the Final RMP/EIS include additional information about this concern. Erodible soils represent a significant source of pollutants in the planning area. For this reason, we recommend the Final EIS include a map depicting areas of steep slopes and fragile or erodible soils and proximity to surface waters. Depending on a host of variables including soil characteristics, industrial operations and topography, associated runoff could introduce sediments as well as salts, selenium, heavy metals and other pollutants into surface waters. To fully disclose and, if necessary, mitigate the potential impacts of soil disturbance, we recommend that the Final RMP/EIS include an estimate of erosion rates, by alternative, in areas where fragile or erodible soils are present. For example, the Wyoming BLM's Bighorn Basin Draft RMP/EIS estimated erosion rates based on projected amount of surface disturbance, types of surface disturbance and general characteristics of the basin (erodible soils, slopes, etc.). Erosion rates were calculated using the Water Erosion Prediction Project model (WEPP), a web-based interface developed by the U.S. Department of Agriculture, Agricultural Research Service, which can be accessed at <http://ars.usda.gov/Research/docs.htm?docid=10621>. We recommend that the BLM consider using this model or another appropriate model.

Surface Water Impacts and Mitigation

Contaminants from surface events such as spills, pit and pipeline leaks, and nonpoint source runoff from surface disturbance have the potential to enter and impact surface water resources if these events occur in close proximity to water bodies. If surface activities are set back from the immediate vicinity of surface water, wetlands, and designated source water protection zones, this provides an opportunity for accidental releases to be detected and remediated before impacts reach water resources. If accidental releases are not detected, the setback provides a safety factor and some possibility of natural attenuation occurring. Setbacks also help prevent nonpoint source pollutants such as sediments from impacting surface waters.

Oil and Gas Leasing Stipulations to Protect Water Resources: The Preferred Alternative includes water resources protections through oil and gas leasing stipulations. Specifically, the Preferred Alternative proposes the following two NSO stipulations: "Surface occupancy and use is prohibited within perennial or intermittent streams (as indicated by obligate wetland species or hydric soils); lakes, ponds, and reservoirs; and floodplains;" and "Surface occupancy and use is prohibited within riparian and wetland areas." In addition, a Controlled Surface Use (CSU) stipulation is proposed to ensure that special operating procedures are required within 300 feet of riparian or wetland areas.

We have several concerns and recommendations regarding the wording of the NSO stipulations, as follows:

- The use of "obligate wetland species or hydric soils" as indicators for intermittent streams results in an unnecessarily narrow definition of intermittent stream that would likely result in excluding many of these streams from protection. We recommend removing this clause from the NSO stipulation.
- Since the Draft RMP/EIS identifies 97% of stream miles in the planning area as intermittent or ephemeral, we recommend further clarification to the "streams" language by including

ephemeral streams in the list of water resources to be protected by the NSO stipulation.

- We recommend clarifying the NSO language to be applicable to “100-year floodplains” in order to provide certainty for operators.
- In reviewing numerous oil and gas leasing stipulations contained in other BLM EISs, we have not seen an exception process to allow drilling *within* water bodies or wetlands. It is our understanding that a “no exceptions approach” within a water body or wetland is BLM’s standard procedure. We recommend removing the exceptions clause from the MCFO NSO stipulations given the importance of preventing disturbance within water bodies and wetland areas.

In addition, the EPA recommends BLM consider revising the 300 foot CSU setback for riparian and wetland areas to a 500 foot NSO setback for perennial, intermittent and ephemeral streams, lakes, ponds, reservoirs, riparian and wetland areas. Other BLM Field Offices have required a 500 foot setback to minimize potential deterioration of water quality and to maintain natural hydrologic function of stream channels, stream banks, floodplains, and riparian communities (e.g., see Grand Junction Field Office Draft RMP/EIS, NSO-1, Major River Corridors; NSO-2, Streams/Springs). We also recommend adding “springs” to the list of water resources protected by these stipulations in order to maintain proper function of these susceptible resources (e.g., see Grand Junction Field Office, NSO-4, Lentic Riparian Areas – which includes springs, seeps and fens). Further, given the large number of water bodies in the MCFO planning area that are impaired due to sedimentation and/or alteration in stream-side vegetative cover, we recommend a 750-foot NSO buffer for these impaired waters located in areas of high development potential (such as the Powder River and Williston Basins and the Cedar Creek Anticline).

Potential Measures to Protect Water Resources from Impacts Due to Grazing: Grazing has the potential to adversely impact water resources, including surface and ground waters, wetlands, streams, springs and riparian areas. BLM’s Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM for Montana and the Dakotas underwent NEPA analysis in 1997 and are incorporated into the relevant RMPs, including the MCFO RMP.

We understand from our conversation with you that environmental assessments are prepared to assess the effects of alternatives developed to ensure that Rangeland Health Standards are met through grazing allotment goals and objectives. If livestock grazing levels or practices are a significant factor in failing to meet Rangeland Health Standards, the BLM has committed to take action no later than the start of the next grazing year to initiate progress toward meeting the Standards. Since such action must be taken quickly, we recommend that the Final RMP/EIS include a list of potential measures that could be implemented at the project level to meet Rangeland Health Standards. This list could include measures that the MCFO has taken in the past, as well as the following suggestions:

- Require special protections for high quality wetland resources such as springs and fens. Such protections might include development of alternative water sources, fencing to exclude livestock from a spring source, and redirection of spring water to a trough for watering;
- To avoid possible infiltration of groundwater with contaminants resulting from congregation of livestock, require adequate separation between a livestock water well and the water trough or tank;

- Specify steps to protect and/or repair any existing exclusions and upland water developments, and develop new range improvements to protect water resources;
- Monitor impacts from grazing adjacent to high value water resources;
- Adjust the timing of grazing by delaying Spring turnout, increasing rotation, and focusing grazing on areas less intensely used in the previous year; and
- Develop a monitoring plan and schedule to assess effectiveness of range improvements in protecting aquatic resources.

In addition, we recommend the Final RMP/EIS identify the general features of an effective adaptive management plan that could be employed at the project level, including the following:

- Decision tree with achievable and measurable objectives to provide accountability and guide future decisions;
- Specific decision thresholds with identified indicators for each impacted resource;
- Targets that specify a desired future condition;
- Commitment to implement and fund a monitoring plan with protocols to assess whether thresholds are being met;
- Commitment to use monitoring results to modify management strategies as necessary; and
- Designated timeframes for completion of necessary management modifications.

(4) Public Drinking Water Supply Sources in Montana

Public Drinking Water Supply Source Characterization

In order to ensure that public drinking water supply sources (e.g., surface water sources, including groundwater under the direct influence of surface water (GWUDISW) sources, and groundwater sources) are protected from potential impacts associated with BLM-authorized activities in the planning area, it is important to identify where these sources are located. Therefore, the EPA recommends that the Final RMP/EIS include a map delineating source water protection areas for public water supply wells. Please see Enclosure 2 for a map of the Public Water Supply Inventory Regions in the MCFO as prepared by MDEQ (contact Joe Meek, MDEQ, via the contact information below to enquire about the zones and how to get the GIS layers). We also recommend identifying reservoirs that are drinking water sources.

Public Drinking Water Supply Source Mitigation

In order to ensure public drinking water supply sources (e.g., surface water sources, including GWUDISW sources, and groundwater sources) are protected from potential impacts associated with oil and gas leasing, the EPA recommends the following NSO language:

Municipal Supply Watersheds¹ - NSO within any of the following areas, as deemed appropriate by the BLM:

- The entire watershed; or
- Local Source Water Protection Planning Areas where delineated in a Source Water Protection Plan; or
- Surface Water Spill Response Region or Groundwater Inventory Region defined by Source Water Assessments that have been delineated or evaluated by the State.
 - Surface Water Spill Response Regions are ½-mile-wide zones (on both sides of rivers or streams, upstream of drinking water intakes. They include the water body with the surface water intake and significant tributaries, for 10 miles upstream of the drinking water intake. For lakes and reservoirs, they include a ½-mile-wide zone around the water body.
 - Groundwater Inventory Regions are based on a three-year time of travel or a fixed radius of 1,000 feet (concentric buffer) around the public water supply well.

For surface water sources, if the Municipal Supply Watersheds NSO stipulation is not deemed feasible by the BLM, then at a minimum we recommend a 1000-foot NSO or CSU setback on both sides of the river or stream, for 10 miles upstream of the intake. For lakes and reservoirs, this would include a 1000-foot NSO or CSU setback around the water body.

For groundwater and GWUDISW sources, if the Municipal Supply Watersheds NSO stipulation is not deemed feasible by the BLM, we recommend a minimum 1,000-foot CSU concentric buffer for these sources. We make this recommendation based on consultation with Joe Meek, the Source Water Protection Program Manager with the MDEQ. He may be contacted for additional information at 406-444-4806 or jmeek@mt.gov.

The EPA also recommends the BLM include a commitment in the Final EIS and ROD to provide notice to lessees regarding these important areas in the MCFO. Lease notices for drilling within Source Water Protection (SWP) Zones of public water supplies are now being used for all wells drilled under BLM authority within SWP Zones in Utah.

(5) Wetlands, Riparian Areas and Springs

The Draft RMP/EIS indicates that over 80 springs have been identified in the MCFO planning area. Springs often contain rare or unique plant and animal species in addition to being important contributors to hydrologic function. Therefore, the EPA recommends that the RMP include a commitment for further analysis of springs at the project level, including evaluation of function or condition prior to authorizing any activities in these areas. To ensure that springs, as well as perennial seeps and wetlands, are identified to facilitate their protection, we recommend delineation and marking of perennial seeps, springs and wetlands on maps and on the ground before development.

¹ Forest Service Manual (FSM2542) defines Municipal Supply Watersheds to include: "surface supply watersheds, sole source aquifers, and the protection zones around wells and springs." In Montana, protection zones are known as Inventory Regions.

We also recommend including a list of potential mitigation measures that may be applicable at the project level for oil and gas construction, drilling and production activities to prevent adverse impacts to these aquatic resources. These could include silt fences, detention ponds and other stormwater control measures. Other potential mitigation measures, including oil and gas leasing stipulations and measures to protect water resources from grazing impacts, are discussed above under Surface Water Mitigation.

(6) Water Management and Water Resource Monitoring

Water Management

Given the large number of oil and gas wells estimated for the planning area, water demand associated with the drilling and completion of these wells is an important consideration that will benefit from careful analysis and disclosure. The EPA recommends the Final RMP/EIS analyze the following:

- Estimated water demand for the anticipated oil and gas development in the planning area;
- Possible sources of this water; and
- Potential impacts of the water withdrawals (e.g., drawdown of aquifer water levels, reductions in stream flow and associated water quality, and impacts on aquatic life, wetlands, and other aquatic resources).

In addition, the EPA recommends the Final RMP/EIS analyze and disclose how flow back and produced water will be managed, including:

- Estimated volumes of produced water;
- Options and potential discharge locations for managing the produced water (i.e., UIC wells, evaporation ponds, and surface discharges);
- Possible target injection formations, formation characteristics and depth of any UIC wells; and
- Potential impacts of produced water management.

Given the significant increase in rate of development expected in the MCFO planning area, the EPA recommends BLM encourage operators to consider recycling produced water for use in well drilling and stimulation, thereby alleviating the need for water withdrawals and for produced water management/disposal facilities and minimizing the associated impacts.

Water Resource Monitoring

The groundwater and surface water monitoring plans established in the 2008 Montana Statewide Oil and Gas Leasing EIS (and referenced in the MCFO Draft RMP/EIS Monitoring Appendix) appear to apply only to coal bed natural gas development. The EPA recommends that MCFO require all BLM-authorized oil and gas multi-well projects to conduct groundwater and surface water monitoring, similar to RMP requirements included by other BLM Field Offices, e.g., White River and Grand Junction in Colorado. To that end, we recommend that the Final RMP/EIS address how water quality monitoring in the planning area will occur prior to, during, and after such development to detect impacts to both surface water and groundwater resources, including private well monitoring. A recent example of a

water quality monitoring plan is the “Long-Term Plan for Monitoring of Water Resources” developed by BLM for the Gasco Energy Inc. Uinta Basin Natural Gas Development Project Final EIS². Also, the National Ground Water Association’s Water Wells in Proximity to Natural Gas or Oil Development Brief³ provides information on the importance of baseline sampling for private wells and types of analysis recommended.

(7) Environmental Justice

The Draft RMP/EIS discloses that American Indians represent nearly 11% of the population in the planning area with a high percentage living in poverty. Depending on the county, percentages of persons living below the poverty level range to more than 30%. The Environmental Consequences chapter of the Draft RMP/EIS states that no alternative will result in disproportionate impacts to these populations. To confirm this determination, we recommend additional environmental justice analysis at the project-level stage of NEPA given the demographics of the area and the potential impacts from oil and gas development. If project-level impacts to these populations are identified, then we recommend outreach, consultation, and mitigation of impacts for the affected communities.

(8) Climate Change

Pursuant to draft Council on Environmental Quality (CEQ) guidance and Executive Order 13514, BLM has included an analysis and disclosure of greenhouse gas (GHG) emissions and climate change. We note that the GHG EI does not include oil and gas emissions from “downstream” activities that will occur outside the planning area. Because information on these “downstream” indirect GHG emissions from activities such as refining may be of interest to the public in obtaining a complete picture of the GHG emissions associated with BLM-authorized activity in the planning area, it may be helpful to estimate and disclose them.

The EPA’s Rating

Based on our review, the EPA is rating the Draft RMP/EIS Preferred Alternative as Environmental Concerns – Insufficient Information (EC-2). The “EC” rating indicates that the EPA review has identified potential impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the Preferred Alternative or application of mitigation measures that can reduce these impacts. The “2” rating indicates that the EPA has identified additional information, data, analyses, or discussion that we recommend for inclusion in the Final RMP/EIS. A full description of the EPA’s rating system is enclosed for your convenience (see Enclosure 1).

We appreciate the opportunity to comment on this document, and hope our suggestions will assist you with preparation of the Final RMP/EIS. We would be happy to discuss these comments and our

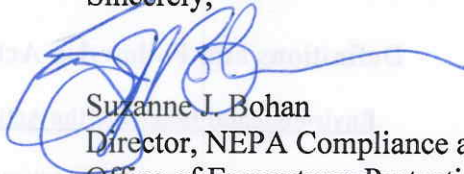
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http://www.blm.gov/pgdata/etc/medialib/blm/ut/vernal_fo/planning/gasco_eis/gasco_folder_6.Par.10452.File.dat/28_Gasco%20Appendix%20O.%20Long-term%20Water%20Monitoring%20Plan.pdf

³ http://region8water.colostate.edu/PDFs/Water_Wells_in_proximityNGWA2011.pdf

suggested solutions. If you have any questions or requests, please feel free to contact me at 303-312-6925 or Amy Platt of my staff at 303-312-6449 or by email at platt.amy@epa.gov.

Sincerely,



Suzanne J. Bohan
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosures

ENCLOSURE 1
U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

ENCLOSURE 2
MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOURCE WATER PROTECTION AREAS IN THE MILES CITY FIELD OFFICE

Source Water Protection Areas - Miles City BLM Field Office Area

As Of 03/20/2013

Legend

Source Water Protection Program

Inventory Regions

- Community PWS
- Transient PWS
- Non-Transient Non-Community

